



### **Opis zmian wprowadzonych w Adroit6 wersja 6.0.1.3**

**PLEASE NOTE:** A serious bug was introduced into the Adroit Classic UI in Adroit 6.0.1.2, which prevented Event Viewer windows from displaying events.

In other words, when an Event Viewer window is opened in Adroit 6.0.1.2, it will indefinitely indicate that it is "Busy..." retrieving events.

For this reason the critical update and CD release of Adroit 6.0.1.3 has been created, which resolves this problem. Apart from this fix the Adroit 6.0.1.3 update and CD release is identical to that of Adroit 6.0.1.2, as described below:

From this release onwards, there will no longer be TWO separate releases of Adroit 6 (i.e. a separate Adroit Classic and Adroit with Smart UI components release) as this Adroit installation will now contain both the Classic and the Smart UI components, which can either be installed separately or together, as required.

This decision has been made to SIMPLIFY the production and distribution of Adroit and NOT because the Smart UI components are now a replacement for the Classic Adroit UI. In other words, we STILL recommend the following:

- That Adroit Classic is used by existing customers for existing projects.
- That Adroit with the Smart UI components is used by new customers, who have no prior knowledge of Adroit and also for those existing customers, which want to use the new Smart UI functionality in NEW projects.

**Note:** Currently for the sake of simplicity and to optimize the size of the downloadable evaluation version, we will continue to provide the Adroit Classic installation on our website.

As a result of this change the Adroit installation, now presents the user with the following installation options:

1. **Classic**—This installs the Agent Server, its API interfaces and the Classic Adroit User Interface.
2. **SmartUI**—This performs the Classic installation and also installs the Smart UI Clients & Server.
3. **Complete**—This performs the SmartUI installation and also installs the following additional Adroit installation components: the Adroit demonstrations and technical description; the Adroit training material and the Wanlink utility, which can be used to link Agent Servers over a Wide Area Network.

**Note:** The Smart UI Web Service component is NOT installed by this option.

4. **Custom**—This setup option is recommended for advanced users only, since it allows the user to select which Adroit Classic and/or Smart UI components should be installed.

**Note:** This Custom installation option is the ONLY way in which to install the Smart UI Web Service, which provides Internet connectivity to Smart UI clients (Designer and Operator) and can ONLY be installed on a computer that has IIS (Internet Information Services).

This Custom installation option provides the following installation options:

a. **Adroit:** Agent Server, its API interfaces and Classic User Interface installation option is a complete installation of the Adroit SCADA software, installed by all the other installation options. This also provides the following sub-components that can be optionally installed:

• The Smart UI Clients & Server (which are also installed by the SmartUI and Complete installation options).

- 1 The following additional Adroit installation components: the Adroit demonstrations and technical description; the Adroit training material and the Wanlink utility, which can be used to link Agent Servers over a Wide Area Network.
- 2 The Smart UI Web Service (for Smart UI Client Internet connectivity).

- b. **Adroit User Interfaces ONLY** installation option, only installs the Classic and / or the Smart User Interfaces.
- c. **Adroit Server API Interfaces ONLY** installation option, only installs the OLE Server files and other API interfaces to the Agent Server.
- d. **Smart UI Clients and Server ONLY** installation option, only installs the Smart UI clients (Designer and Operator) and its Server components.
- e. **Smart UI Web Service** installation option, installs this web service, which allows Smart UI clients (Designer and Operator) to connect over the Internet.

**PLEASE NOTE:** Since the Smart UI components require the Microsoft .NET framework, the following additional installation restrictions apply when these components are installed:

- Microsoft .NET framework 1.1 & Service Pack 1 must be installed, both of which are distributed on the CD.
- If the operating system is Windows 2000, then Service Pack 4 or later must be installed and Microsoft Internet Explorer 6 or later is also required.

**The Adroit 6.0.1.3 update on the web and on the Adroit 6.0.1.3 CD:**

As described in the installed 'adroitupdate.txt' file:

A list of the most important improvements and fixes made in this update, can be located on the Adroit website, from this address: <http://www.adroit.co.za>, as follows:

NOTE: The website is optimized for a 1024x768 screen resolution.

1. Select the "Downloads" button from the main page (the 7th button from the left between Support and Training) or simply specify this URL instead: <http://www.adroit.co.za/Downloads.htm>.

This will immediately display the latest Adroit demos and reference manual downloads.

2. Click the "Updates" button on the upper left hand side of this page.

3. Select the required version of Adroit, in this case 'Adroit 6.0' from the Version drop-down list box and press the "Search" button.

This will display a list of all the available update files for Adroit 6.0.

4. Click the "Download" button to the right of the 'Adroit 6.0.1 Description' entry.

This will display the list of the most important improvements and fixes made in this update.

- This update, can be accessed via the Adroit 6 Downloads page of the Adroit web site, as described in steps 1-3 described above. Although steps 1-2 can also be bypassed by clicking on the Web Updates icon in the Adroit 6 Start Menu folder.
- These files will need to be downloaded before they can be executed.
- This update includes the latest Adroit 6.0.1 and Wanlink help files.

**PLEASE NOTE:** Due to the prevalence of memory sticks and instability of 1.44MB 3.5" disks, the Adroit updates will NO LONGER be sized to fit onto 1.44MB 3.5" disks. However we recommend that you use a download manager to ensure both the fast and successful downloading of the single update file (such as Free Download Manager: <http://www.freownloadmanager.org/>), which can resume broken downloads and also provides download acceleration and scheduling functionality too).

The "Adroit 6 Updating Instructions" entry, contains the following:

**SAFE UPDATE INSTALLATION INSTRUCTIONS**

The safest way to update your Adroit installation is as follows:

1. Stop ALL programs - and this means ALL programs!

Note: Before an Adroit Update is performed all the Adroit processes (its applications, services and / or utilities) that are currently running are FORCED to SHUT DOWN. However, to prevent the possible loss of configuration, it is RECOMMENDED that you CLOSE ALL Adroit applications and utilities yourself BEFORE running the update.

2. Backup of your Adroit System folder (typically: C:\Adroit) as a matter of caution, using the Adroit Backup utility.

3. If necessary, copy the UPDATE.EXE file into a temporary folder on your PC.

4. Execute this update file, to begin the installation of the update.

Note1: In order to run the update, one must be logged on with Administrator privileges.

Note2: The update will install these files into the Adroit system folder in which Adroit was installed.

**WARNING:** This update will UPGRADE the OPC Client driver to support automatic reconnection (ON by default) and proper primary / secondary support. If you are unsure about these changes, then backup your existing driver (OPC\_CL.DLL) first and restore it after applying this update. Read the OPC\_CL.DOC file, included in this update, to understand the new features of this driver better.

**PLEASE NOTE1:** Scripts now return datetime tags as a LOCAL time NOT as UTC time. Therefore ensure that any CONVERSIONS that convert UTC time into LOCAL time are REMOVED.

**PLEASE NOTE2:** Previously, template mimics and trends could have lost their template configuration when Adroit was logged on by a user who did not have a comma ',' as his chosen file delimiter character.

This has now been fixed, by forcing all mimic and trend template sets to use the comma as their delimiting character.

Therefore this will ONLY affect you, if you have a MULTI-USER environment AND any TEMPLATE MIMICS AND TRENDS were LAST SAVED BY A USER that was NOT USING A COMMA ',' as the delimiter character. In this case, to prevent the loss of the template configuration, when this update is applied, follow this procedure first:

1. Before upgrading, export the template substitution for EVERY template mimic and trend to CSV files and make a backup of all of the existing template mimic and trend files.

Note: To export the template substitution for a template mimic or trend, open its 'properties', select the 'Template' tab and press the 'Export to CSV file' button (the right-most button) and specify the required file name and OK the dialogs.

2. Shutdown the Agent Server and the User Interface.

3. Apply the update.

4. Edit each of the saved template substitution CSV files: search and replace the current delimiting character, such as ';' with a comma ',' and save each of these files.

5. Restart the User Interface and the Agent Server, if necessary.

6. Edit each template mimic and trend, [open its 'properties' and select the 'Template' tab] and delete ALL the existing template substitutions and then import these from its relevant CSV file.

7. Save this template mimic or trend file and check that its template functionality is working.

#### **Adroit 6.0.1.3 improvements and fixes:**

Affecting the Agent Server:

- Fixed a serious bug that prevented Event Viewer windows from displaying events, introduced in Adroit 6.0.1.2.

#### **Adroit 6.0.1.2 improvements and fixes:**

Affecting the Agent Server:

- **New:** The local subscription update buffer has been doubled in size to 2 million bytes and the local subscription update buffer handling has also been fine-tuned.

- Fixed the incorrect debug memory mapping causing client channel 16 to fail and the subsequent erratic operation of the Agent Server, which was introduced in Adroit 6.0.

- Added protection to local subscription update handler to try and prevent filling of local update subscription buffer which causes a fatal Agent Server failure, which is believed to be caused by clients on an unhealthy network.

- Important Smart UI 1.2 fix.

- The HASP software libraries have been updated to accomodate Windows Server 2003. Users of Windows 2003 Server SP1, in particular, should take note of the following Knowledge Base item:

**PLEASE NOTE:** The Agent Server may be unable to read the HASP, at startup causing the Agent Server to hang or fail and/or to display HASP exceptions in the Agent Server window, when DEP

(Data Execution Prevention) has been enabled on the computer. (DEP prevents damage from viruses and other security threats that attack by running (executing) malicious code from memory locations that only Windows and other programs should use.)

To check whether DEP is incorrectly configured on a computer, perform the following steps:

1. Right click on **My Computer** and select **Properties**.
2. Select the **Advanced** tab and press the **Settings** button under the **Performance** heading. This will display the **Performance Options** dialog.
3. Select the **Data Execution Prevention** tab - if you do not see this tab, it is not installed on your computer.
4. The default setting is **Turn on DEP for essential Windows programs and service only**, HOWEVER computers that exhibit the above symptom will have **Turn on DEP for all programs and services except those I select** enabled. If not, the problem lies elsewhere.
5. If the DEP option has been enabled for all programs, press the **Add...** button and browse for and add both the **AS.EXE** and **ASS.EXE** executables from the Adroit folder, which is typically C:\Adroit.
6. Reboot the computer.

Affecting the following agents:

- Datalog:

1) **New** - Previously, when logging to an OLE-DB compliant database, each datalog agent that logged to the same table checked for the existence of this table. This was a time consuming task that caused lengthy Agent Server startup times. Now this check is only done ONCE for each table.

2) Previously, if data was exported from the retrieve dialog, the exported file ONLY used the comma as the file delimiter, IGNORING the default file delimiter (this is configured in Regional Settings applet in Control Panel), which made this file unreadable by programs such as Excel. Now the exported file uses the file delimiter configured for the currently logged on user.

3) The datalogging length is no longer restricted to 24 hours, when the Agent Server is run in HMI mode.

4) **New** - Values are no longer logged if ONLY the time has changed to a newer time.

- Device:

1) Fixed a serious bug that prevented the unscanning of @scanned tags and caused permanent Device agent locks and therefore an unworkable Agent Server.

2) Previously, the device agent's healthy status bit could be set to false, if a scan item was unscanned and rescanned at a faster rate. This will no longer occur.

Other:

- Adroit API DLL (as\_api.dll):

1) Important Smart UI 1.2 fix.

- HASP Drivers (Hinstall.exe):

1) **New** - The latest version of the HASP drivers (4.99) is also installed by this update, if not currently installed.

### **Adroit 6.0.1.1 improvements and fixes:**

Affecting the Agent Server:

A check is now performed for the existence of a softlicence if a HASP read failure occurs

HASP HL support has been added to read the new HASPs

Fixed the Smart UI licensing.

Affecting the UI:

Fixed the incorrect double UTC to local time conversion of the time displayed on the X-axis of the Trend window.

Other:

Adroit API DLL (as\_api.dll): Fixed Smart UI licensing.

WanClient, WanServer : Removed the race condition that existed for tags specified in a normal and a control group, since previously if a change was made at one side the change bounced back and forth between the client and server for ever.

### **Adroit 6.0.1 improvements and fixes:**

Affecting the Agent Server:

- The Agent Server is now able to start the Smart UI (VIZNET) Server automatically, when the Smart UI is installed. However, the currently logged on user must either be an Administrator or a Power User.
- Software licensing now works for Adroit Version 6 too.
- **New** - cluster and proxy servers now work if the current Adroit version is <= HASP version. Previously, upgrading a HASP without upgrading the Adroit software caused Agent Server to Agent Server connections to fail.
- F1 help has now been added to the Agent Server window.
- Fixed COM initialization for improved OPC client shutdowns.
- The Agent Server now checks for the maximum number of agents before adding new agent(s), to fix the crash that used to occur when too many agents were added.
- Fixed a bug where WGP files with line lengths greater than 256 could cause a failed load if the line contained a [] pair.

Affecting the following agents:

- Alarm:

- 1) A fix for a problem whereby VIZNET was unable to acknowledge alarms of agents that had lowercase characters in their names.
- 2) Support has been added for the operator name in "ackone" operations i.e. the "localackone" and "globalackone" slots of the Alarm agent, now support the following syntax:  
'agentInAlarm.alarmType[,OperatorName].

- Analog:

- 1) **New** - This agent now provides reverse polarity, which allows its Engmax value to be lower than the Engmin value, by adding the following DWORD registry value HKEY\_LOCAL\_MACHINE\Software\Adroit Technologies\Adroit\AnalogRawComms and setting it to 1. This registry value also disables the automatic validity checking of alarm values against engineering range that usually occur within the Analog agent, so that its alarm limits can be communicated.
- 2) Fixed a problem in which the UI would crash when opening the dialog of an Analog agent that contained very large slot values.

- Command:

- 1) Memory creep and thread memory creep problems have now been fixed. Also added ProtDrvCmdDetach support to stop exceptions from occurring during disconnect and reconnect to the GSM driver after pressing the Update button and fixed the analog format specifier, delivery report thread and set command putslots.

- Custom:

- 1) **New** - An event will now be logged if a script is executed that contains compilation errors, preventing it from being run. However, this event could result in the event log from being flooded, therefore ensure that the event log is closely monitored and that any buggy scripts are either fixed or disabled ASAP!
- 2) **New** - The Script button is now disabled when the Custom agent script file is not found.
- 3) A slot number range check is now enforced on getslots to prevent possible exceptions.
- 4) Fixed the intermittent failure when creating and publishing the Custom agent dll's.

- Datalog:

- 1) **New** - Support has been added for the compression algorithm when using Demand logging, by adding the following DWORD registry value HKEY\_LOCAL\_MACHINE\SOFTWARE\Adroit

Technologies\Adroit\Logging\SupportCompressionOnDemand and setting this to 1.

- 2) The averaging algorithm has also been improved.
  - 3) Fixed ADO timestamp values to be compatible with SQL which previously displayed the day as being out by two days.
  - 4) When datalogging to a database, the square brackets are now removed from around table names for non-Jet connections (such as MySQL) SELECT statements.
- DbAccess:
- 1) Previously the DBAccess agent simply stopped transacting if a connection failed (due to network problems etc), now it will recover and continue transacting.
- Device:
- 1) **New** - Support has been added for drivers that use the @ character in scan addresses by disabling @ scanning for the required device by adding the (REG\_)DWORD registry value "DisableAtScanning" to the registry for the required device and setting it to 1. For example if you wanted to disable @ scanning in the SIMPLC device you would create the registry value in the following registry key:  
HKEY\_LOCAL\_MACHINE\SOFTWARE\Adroit Technologies\Adroit\ProtocolDrivers\SIMPDRV\SIMPLC.
  - 2) **New** - Added the subsCount slot, which displays the number of @scanned tags configured for a device.
  - 3) Now the adding or removing of scanpoints at runtime will affect the scan licence usage as expected.
  - 4) Removed an intermittent Adroit 5.0 backward compatibility issue where scanpoints could not be unscanned.
  - 5) Driver callbacks are now discarded when the Agent Server is shutting down.
  - 6) If a device agent is unable to attach to its associated front-end device at startup, it will now be relegated to a separate thread, which re-attempts to attach to this device. Once the device has been successfully attached, all of its scanned tags are re-instated. However, until this re-attachment occurs, no configuration may be done on this device. This fix also eradicates the problem in which scanpoints were lost, when a device agent had been unable to attach and the WGP file was then saved.
- EventOutput:
- 1) Fixed the save failure of this agent that caused the WGP file not to save.
- Expression:
- 1) **New** - By design, a triggered Expression agent will always generate subscription updates for the value slot even if the value slot has not actually changed. Expression agents that use systeminfo.second triggers will suffer greatly from this problem, which creates unnecessary Agent Server CPU loads and network traffic where remote UI clients are deployed.
- Therefore, to disable subscription updates for the value slot, for a triggered Expression agent, if the value slot has not actually changed, simply add the following registry key and DWORD registry value and set this value to 0: HKEY\_LOCAL\_MACHINE\Software\Adroit Technologies\Expressions\PropagateTrigger, the default value is 1.
- Marshal:
- 1) Previously the rawvalue of the Marshal agent and the value in the PLC did not always contain the same value, this has now been fixed.
  - 2) Fixed the copying of the Marshal agent.
- Notify:
- 1) Fixed an import bug that caused a DLL Exception when no trigger tag was specified.
- Perfmon:
- 1) The browse button text now displays "Browse ..." after usage, instead of "...".
- Scan:
- 1) **New** - Added PROTRVGETOPTIONS support to allow for outputs even if the device is disconnected or off-line.
  - 2) **New** - Now the device agent will become healthy after a write has successful been completed - these two enhancements are especially important for the POLYCOMP driver which only supports output transactions.



3) Fixed the operation of this agent's secondary slot, previously this slot never turned on when the secondary port was used.

- Script:

1) **New** - An event will now be logged if a script is executed that contains compilation errors, preventing it from being run. However, this event could result in the event log from being flooded, therefore ensure that the event log is closely monitored and that any buggy scripts are either fixed or disabled ASAP!

2) Adroit.GetTag operations on time tags now return local time values instead of UTC time. Therefore any CONVERSIONS that are being used to convert UTC time into LOCAL time will NOW return the INCORRECT time and must be REMOVED.

- **SNMPManager:**

1) **New** - This NEW agent is used to integrate network management using the Simple Network Management Protocol (SNMP) with the Adroit SCADA. For further details, see the Adroit Help.

- SystemDatalog:

1) Datalog backups are no longer incomplete when backing up large amounts of data.

- SystemInformation:

1) The systeminfo.savenow slot now always saves the currently loaded WGP file.

- Timer:

1) Changed the type of the pulsewidth slot from boolean to integer.

Affecting the UI:

- **New** - Added support for the importing of alarming.

- **New** - Added support for the importing of Stringlist agents.

- Fixed the problem where import files edited in MS Excel could not be imported because the last comma was removed from every line.

- Fixed the possible crash when using the right-click menu of the Configurator.

- Fixed the context-sensitive enabling of individual menu items in the right-click menu of the Configurator.

- Fixed the previous inability to unscan scan entries with long scan addresses.

- Fixed the filter group column in Event Log windows to display group numbers > 127.

- Fixed two causes of an abnormally long delay when opening event logs on remote PC's while logged onto Adroit as another user.

- Fixed a latent "Out of memory" error in Trend windows, when increasing a window period that requires a change in the sample rate.

- Fixed the Trend window crash caused by attempting to look at historical data in a window period where there is no data.

- Now the x-axis date time display of the Trend window is the date time format as configured in the Control Panel.

- Fixed the intermittent crash of the Trend window caused by reducing its x-axis time span.

- **New** - The operator name tag setting is now stored as a global setting, so that it can be configured once only and not individually for every user. However, when the User Interface is started in workspace mode (for multi-monitor applications) this setting will be stored as a current user setting for the appropriate workspace.

- The problem where the operator name tag was not shadowed to the standby server has now been fixed, by forcing the change of this operator name tag.

- **New** - Users now have the option to use Silence UI Tag as a global setting i.e. for all users who log on to PC. Now when this tag is changed and the dialog is closed, the user will be prompted as to whether this should be applied as a global setting.

- Fixed the corruption of the alarmed tag list in the Alarm Indication tab of the UI Preferences dialog,

caused by browsing in a tag for silencing the UI.

- **New** - Agent Explorer: Improved the error messaging in the Scan dialog, now when an add scan or remove scan action fails, there is an improved dialog box message indicating the reason for this failure AND added primary/secondary device support for the OPC browser.
- **New** - Added support for multiple Location behaviors on a picture element.
- Fixed the order in which a mimic, associated with an agent, is searched for - so that now the UI will look for a mimic that has the same name as the agent first if this agent's picture slot is undefined.
- **New** - Added the Reset and Switch buttons to the device details dialog. These buttons only work for protocol drivers that support this functionality, which is specified in their relevant protocol driver document e.g. OPC\_CL.DOC.
  - The Reset button causes the device to reset (close and re-open) the connection to the connected front-end, if supported by the protocol driver.
  - The Switch button causes the device to switch the connection from the primary to the secondary connection, if configured and supported by the protocol driver.
- **New** - Agent filter group values are now supported in operator action event logs. In other words, operator actions performed on tags that appear in the event log now display the correct filter group of these tags, previously the filter group was always reported as 0.
- **New** - Added primary/secondary device support for the OPC browser in the scanning dialog.
- The exporting of WGP files with lines up to 10000 characters in length is now permitted; previously this maximum character length was 1000.
- All mimic and trend template sets are now forced to use the comma as their delimiting character, to prevent the possible loss of template configuration that could occur in a multi-user environment, if the template configuration was saved by a user who did not have a comma ',' as his chosen file delimiter character.

Other:

- Adroit API DLL (as\_api.dll):
  - 1) **New** - Implemented apiFetchChangesEx for VIZNET that returns date values as date variant instead of string variant.
  - 2) Fetching datalog values (by using the FetchValues and/or FetchChanges functions) no longer uses scanpoints.
  - 3) Removed putslot licensing for VIZNET Server connections.
- OLE Interface (missrvr.exe):
  - 1) Fetching datalog values (by using the FetchValues and/or FetchChanges functions) no longer uses scanpoints.
- Adroit ActiveX Interface:
  - 1) Fixed this interface to be backward compatible with Adroit 5.0. However, fetching datalog values (by using the FetchValues and/or FetchChanges Adroit ActiveX functions) STILL uses scanpoints.
  - 2) Now the UTC to local time conversion is no longer performed twice when subscribing to time slots.
- Adroit Utility DLL (adrutils.dll):
  - 1) The comma separator is now mandatory when using the ShowComboBox and ListSlot2Tag functions.
- Adroit Scanning Monitor utility (adrcomms.exe):
  - 1) **New** - Two new columns have been added to the list of devices, to specify which port the device is configured to use i.e. either the Primary or Secondary.
  - 2) Fixed the program exception that occurred when right-clicking on the scan list without a scan job being selected.



- Tag Monitor utility (adrmonitor.exe):

1) Fixed the hint display on the graph, so that as you move the mouse over the trend, the value associated with the time axis for the currently selected pen will be displayed as a hint.

- Adroit Scheduler utility (scheduler.exe):

1) Now the Putslot, Merge and Extract dialogs in the Scheduler refer to the help topics for these operations. These dialogs assist in scheduling these operations, which are launched by selecting the required operation from the 'Program Details' list box and then pressing the browse button to the right of this list box.

2) Fixed the test for Administrator user rights so that this utility now works properly on non-English Operating Systems.

- Adroit OPC Server:

1) **New** - Two new columns have been added to the OPC Server item-address browser, to provide additional information of update activity of values from the Agent Server: "Update", which specify the number of good updates i.e. correct values. AND "Bad updates", which specify the number of bad updates received.

2) **New** - Improved the tag browsing support by ONLY subscribing to the Agent Server for tags that are required by the connected OPC clients. Tags that have not yet been connected to by a client are now displayed as grey text.

3) Fixed the double dialog that was displayed when using the window close button to close this application, while clients are still connected.

4) Fixed a bug in the writing of values.

5) **New** - Writes are now allowed to unsubscribed tags.

- Adroit OPC Browser:

1) **New** - A "Persistent" checkbox has been added, which if checked, will save and restore the currently selected OPC item between browser sessions. So that it is no longer necessary to re-browse for it, when the OPC Browser is displayed again.

2) **New** - Added primary/secondary device support in parameter list. These are internal parameters, which cannot be used manually.

- Postload.wgp:

1) Previously in Adroit 6.0.0 the AgentGroup agent had two references of Boolean and no Counter, this has been fixed.

2) The Command agent has also been added to the Advanced group and so the number of agents has also been changed from 46 to 47.

- WanClient:

1) **New** - Added scanbad handling philosophy and various other enhancements.

2) Fixed crash when stopping communications and improved timestamp handling to eradicate minor timestamp differences between agent servers on alarmed tags.

- WanServer:

1) Timestamps on status only subscription updates are no longer stored, since this caused incorrect client side timestamps for server side alarmed tags.

### Other enhancements:

Changes made to the Adroit Demonstration:

- Added a pump station simulation to the animated mimics section, under "Graphics".

- Added an item to the "New in Adroit 6" page that describes the new SNMPManager agent.

- Modified the relevant scripts that use dates, to deal with the Adroit 6.0.1 change in which time tags no longer require time conversions since local time values are returned instead of UTC time.

- Removed the bulky (50 MB) Adroit video from the demonstration.

- Removed the Adobe Acrobat Reader installation, that used to be installed along with the marketing

material. If a PDF reader is required, then use the free Foxit reader that is now distributed on the Adroit CD (see utilities below).

Changes made to the Samples:

- Modified the publishweb.bas script, to deal with the Adroit 6.0.1 change in which time tags no longer require time conversions since local time values are returned instead of UTC time.

Changes made to the supported Utilities on the Adroit 6.0.1.1. CD:

The following utilities are now also distributed on the Adroit 6.0.1.1 CD in these subfolders, beneath the Utilities folder:

- **PDF Reader:** This provides the free Foxit PDF reader, which is required to view the Adroit manual (contained in the Adroit Manual folder) and any other PDF document, if you do not have a PDF reader installed.
- **Script Language Reference:** This contains the files required to install Version 5 of the VBScript and/or JScript language reference, depending upon the scripting language that you want to use.

Added script references to utilities.

- **Word Viewer:** This now provides the Word Viewer 2003, which allows you to view, print and copy Word 2003 documents and documents created with all previous versions of Microsoft Word, even if you don't have Word installed, such as the "What is new in Adroit 6.0" document.

The following utilities were added to the existing Adroit 6.0 CD:

- **AdrHasp:** This contains ADRHASP, an Adroit utility that reads the Adroit license information from an Adroit HASP. This requires an Adroit HASP to be installed on the computer on which this utility is run.
- **Matrikon OPC Utilities:** This folder contains the following OPC testing and / or troubleshooting utilities that are provided by Matrikon:
  - a. **MatrikonOPC Explorer:** A free OPC client that can be connected to any OPC Server, designed to help test and troubleshoot OPC servers and connections. Also included in this installation is the MatrikonOPC Simulation Server; an OPC-compliant server that provides simulated data values to an OPC client for testing client functionality.
  - b. **MatrikonOPC Sniffer:** A free (30-day evaluation) utility used to troubleshoot OPC client/server interoperability issues by seamlessly logging the activity between OPC servers and clients to isolate interoperability issues and help solve problems quickly and easily.

The following utilities are obsolete and have been REMOVED from the Adroit 6.0.1.1 CD, for the following reasons:

- **Jet4ServicePack7:** The Adroit 5 and previous Adroit 6 CDs contained this folder, which allowed Microsoft Jet 4.0 Database Engine Service Pack 7 to be installed. However the latest Service Pack is now 8 or greater, which should typically be installed as part of the latest Service Pack for your Windows operating system. For this reason this folder has been removed from the Adroit 6.0.1.1 CD. For details, on how to obtain the latest service pack for the Microsoft Jet 4.0 Database Engine, see <http://support.microsoft.com/kb/q239114>.

- **TimeServ:** This used to provide the TimeServ utility, a Windows NT Time Service for synchronizing time between multiple computers on a Local Area Network. However, since Windows provides a newer time synchronization service (W32Time), from Windows 2000 onwards, this utility is no longer necessary.

**Note:** It is important that distributed Adroit systems are time synchronized, since clustering and other important aspects of Adroit are compromised by an unsynchronized system.

#### **Miscellaneous:**

Since the Adroit Smart UI components are now included in the same installation executable on the Adroit 6.0.1.2 CD, it is now possible to ALSO install these components via a network installation i.e. it is NO LONGER necessary to ensure that the Adroit installation files reside on the local computer's hard drive or CD-ROM!

#### **Drivers:**

This is a list of the changes made to drivers after the release of Adroit 6.0. These drivers are available for downloading from their new location in the Adroit website, these can be accessed from the following web address:

<http://www.adroit.co.za/Downloads.htm>. Then click the Drivers button in the top left hand corner.

As before, this page contains the latest Adroit drivers and includes a combination of both Adroit version 4.2, 5.0 and 6.0 drivers, which are totally compatible and interchangeable.

However, it is now possible to simplify your search for particular protocols or drivers, by simply typing the required word into the Search edit box and clicking the Search button and only those drivers containing the selected word(s) will be displayed.

Some general changes being phased in by our driver department are:

1. Since Adroit version 6.0 and 5.0 no longer support Windows 95 and 98, some drivers may obviously not be used in their Windows 95/98 form.
2. Adroit 4.2 CDs only contain critical driver updates and drivers should be used from Adroit 5.0 CDs, if patches are required.
3. Drivers for Adroit 4.1 and earlier are available only on request.

We are currently upgrading our driver web-content, and our driver installation from the Adroit distribution CDs will also change slightly. We have earmarked some drivers as old and unused, and these will be removed from the CDs only in order to discourage their use. We depreciate a driver and mark it as obsolete for any of the following reasons:

- when the support for a driver becomes un-feasible.
- when the driver is superseded by another.
- when we find that a driver has become incompatible with current operating systems or any 3rd party component of the driver becomes un-obtainable.

We may also mark a driver as obsolete when a manufacturer stops support for a product. Do not attempt to use an obsolete driver in a new system or as an addition to an existing system. Obsolete drivers, such as the AB RSLinx Protocol Driver will cease to appear on CDs, but will still be available for download on the web. If you are currently using an obsolete driver, we recommend that you move to a currently supported driver in order to enjoy our continued high support levels.

In future, obsolete drivers will be marked with (Obsolete) in their titles regardless of where you see them, in setup, the CD or the web.

The website is also undergoing some changes that will give our customers more current status on where Obsolete drivers stand, new driver development in the pipeline, and other useful information. We are also adding a driver feedback form (no e-mail needed), so visit our page and comment on the additions that we have made.

**New drivers are in bold** and those existing drivers with bold revision numbers indicate drivers that have been recently updated.

Refer to Specific Driver Bug Fixes below for a description of the improvements added to these drivers, since the last release.

No.	DLL name	Driver Description	Revision
1	ABBP214	Asea Brown Boveri Procontrol 214	77
2	ABSLC500	Allen Bradley SLC 500-DF1 Serial Driver	<b>7</b>
<b>3</b>	<b>ABTCP</b>	<b>Allen Bradley Ethernet Protocol Driver</b>	<b>9</b>
4	ABXKF2B	Allen Bradley Serial Protocol Driver	90
5	ADVNTech	Advntech Protocol Driver	5
6	BECKER	Becker M500 Relay Protocol Driver	1
<b>7</b>	<b>BECKHOFF</b>	<b>Beckhoff TwinCAT ADS-DLL API Driver</b>	<b>7</b>
8	CEFP2000	Centralised Fire Panel Protocol Driver	90
9	CONET	Conet Exception-based Protocol Driver	16
10	CONETPCI	ConetPCI Protocol Driver	6b
11	CYPHER	Cypher Alarm Station Protocol Driver	1

12	DIGIBUS DPM Products Protocol Driver	2
13	DLRML81 D Le Roux & Associates MUL-T-LINK Protocol Driver	14
14	DNP3 DNP 3 Protocol Driver	<b>46</b>
<b>15</b>	<b>DT95SEAL DT95SEAL Exception-based Protocol Driver</b>	<b>8</b>
16	DTAKER	
17	EAGLE Eagle Card Driver	11
18	EAGLEE EagleE Card Driver	2
19	ELEOLV24 Electromatic Optolink V24 Dupline 128 Protocol Driver	80
20	GEM80 Gem80 Protocol Driver	3c
21	GSM_SMS GSM_SMS Protocol Driver	<b>7</b>
22	GSTPROFI GSTProfi Exception-based Protocol Driver	16
23	GSTPROFS GSTProfS Exception-based Driver	12
24	HITACHIE Hitachi Ethernet Protocol Driver	<b>9</b>
25	HITACHIH Hitachi H Protocol Driver	<b>22</b>
26	INTRAC Intrac Exception-based Protocol Driver	<b>12</b>
27	JOYSCC JOYSCC Exception-based Protocol Driver	4a
28	KABTEL Kabtel Ethernet Protocol Driver	6
29	KDL105KS Koyo Direct Logic 105 K-Seq Protocol Driver	75
30	KDL205KS Koyo Direct Logic 205 K-Seq Protocol Driver	75
31	KDL405KS Koyo Direct Logic 405 K-Seq Protocol Driver	75
32	KMSUCOMA Klockner Moeller Protocol Driver	<b>15a</b>
33	<b>KOYO_ETH Koyo Ethernet Protocol Driver</b>	<b>6</b>
34	LECOMAB Lenze LECOM A/B Serial Protocol Driver	4
35	LG_GLOFA Lg_glofa Protocol Driver	<b>1</b>
36	LONWORKS	
37	<b>LOVATO Lovato Protocol Driver</b>	<b>4</b>
38	MITAJC24 Mitsubishi AJ71UC24 Protocol Driver	17
39	MITAJE71 Mitsubishi AJ71E71 TCP (not UDP) Protocol Driver	<b>102</b>
40	<b>MITFXS Mitsubishi FX Series Protocol Driver</b>	<b>6</b>
41	MITQJE71 Mitsubishi Q/QnA Eth. Protocol Driver	23
42	MITSUFX Mitsubishi FX Protocol Driver - Discontinued	11
43	MITSUFXS Mitsubishi FX Series Protocol Driver	<b>4b</b>
44	MOD_ETH Modbus Ethernet Protocol Driver	<b>35</b>
45	MODBUSI Modbus I (RTU and ASCII) Protocol Driver	<b>51a</b>
46	MODBUSP Modbus Plus MBXAPI Driver	<b>19</b>
47	MODBUSR Modbus Radio Protocol Driver	<b>9</b>
48	MOOICI32 Moore ICI 320 Protocol Driver	4
49	NHPMICRO NHP Micro (MLC14)	1
50	<b>OMR_ETH Omron Ethernet Protocol Driver</b>	<b>9</b>
51	OMRSYSMC OMRON Sysmac Protocol Driver	<b>97</b>
52	<b>OMRSYSMM OMRON Sysmac Protocol Modem Driver</b>	<b>99</b>
53	OPC_CL OPC_CL Exception-based Protocol Driver	<b>60</b>
54	OPTO22 Opto 22 (OPTOMUX) Protocol Driver	1
55	PAGER Pager Exception-based Protocol Driver	12
56	POLY_ETH PolyComp Sign Ethernet Protocol Driver	<b>7</b>
57	POLYCOMP PolyComp Sign (GTX) Protocol Driver	7
58	RDC8102 RDC8102 Exception-based Protocol Driver	<b>5</b>
59	REMOTRON Remotron Exception-based Protocol Driver	1
60	RKC_CBXX RKC_CBXX Protocol Driver	0
61	RODAM Rodam Protocol Driver	0
62	SAMSUNG Samsung Protocol Driver	<b>1</b>
63	SASCOM SASCOM (RTU and ASCII) Protocol Driver	3
64	SCANRS ScanRs Protocol Driver	<b>13</b>
65	SCH3964R Schiele systron S 800 3964 and 3964R Protocol Driver	2
66	SCHCUST1 Schiele custom protocol #1	9
67	SCS_SGC SCS_SGC Alarm Station Protocol Driver	1
68	SDESYMAX SQUARE D Sy//Max Ethernet Protocol Driver	6
69	SHIMSR SHIMDEN SR50 Protocol Driver	2

70	SIE3964R	Siemens S5 3964 and 3964R Protocol Driver	90a
71	<b>SIEINAT</b>	<b>Siemens Ethernet Protocol Driver</b>	<b>3</b>
72	SIEH1	Siemens H1 Protocol Driver	27
73	SIEL1	SieL1 Exception-based Protocol Driver	3
74	SIEL2	Siemens L2 Protocol Driver	9
75	SIES7FN	S7 functions (SAPI) Exception-based Protocol Driver	<b>30</b>
76	SISTAR	SiStar/Braumat API using alarm 8P Protocol Driver	<b>33</b>
77	SPABUS	SpaBus Protocol Driver	4
78	SPECTR	Spectrum tele-RANGER Protocol Driver	<b>56</b>
79	SPESCADA	Spectrum SCADA-MUX Protocol Driver	12
80	SQDSYMAX	SQUARE D Sy//Max Serial Protocol Driver	2
81	STKEMAX	Strike ENERMAX Protocol Driver	<b>8</b>
82	TDC0550	TDC0550 Protocol Driver	0
83	TI500	Texas Instruments 500/505 Series Protocol Driver	14
84	TITCPIP	Texas Instruments TCPIP Ethernet Protocol Driver	13
85	TOSHBIN	Toshbin (Binary) Protocol Driver	2
86	TOSHIBA	Toshiba (RTU and ASCII) Protocol Driver	<b>12</b>
87	TOST2ETH	Toshiba T2 Ethernet Protocol Driver	<b>29</b>
88	UHT4	Uht4 Protocol Driver	2
89	UNIPCOM	Unipcom Protocol Driver	4
90	USERDRV	UserDrv Exception-based Protocol Driver	32
91	VAALCOR	Vaalcor Exception-based Protocol Driver	1
92	VAMS	VAMS Protocol Driver	<b>19a</b>
93	<b>VANT_PRO</b>	<b>Vantage Pro Serial Protocol Driver</b>	<b>1</b>
94	YOKOGAWA	Yokogawa uXL DCS Protocol Driver	4a

**PLEASE NOTE:** The previous version of the Omron Ethernet driver (OMR\_ETH.dll Revision: 6 or less) has been updated with some very important fixes, which resolves various scanning issues. We therefore **STRONGLY RECOMMEND** that you use this updated driver.

If you would prefer, this is also available in Excel format, refer to this attachment:  
 <<Drivers in Update 1.2.xls>>

#### New Drivers:

##### **Allen Bradley Ethernet Protocol Driver**

9 : This now provides Ethernet IP/CIP functionality to support MicroLogix 1100 PLCs.  
 8 : The validation failure when using control logix arrays has been fixed.  
 7 : Support for 'Real' and 'Integer' slots (32-bits) into Input and Output files disabled, due to consistency problems.  
 6 : Support for SLC505 (and PLC5) re-enabled and tested on a 505.  
 5 : Correct licensing code added.  
 4e : Intermittent start-up crash resolved.  
 4d : The OEM code was not being recognised, this has been fixed.  
 4 : Controls(Writes) were not working for logix plcs, this has been fixed.  
 3 : Documentation and implementation changed for how arrays are scanned and validated.  
 2 : 1-hour demo mode added to allow users without an OEM'ed hasp to try the driver out.  
 1 : First official release (without support for SLC and PLC models).  
 >>> ALSO the DEMO version of the required ActiveX control is provided, this is registered on installation or also after files have been extracted from the Web install.

##### **Beckhoff TwinCAT ADS-DLL API Driver**

7 : Fixed an issue with the releasing of communication resources which caused contention for connectivity where more than one PLC was used.  
 6 : Cosmetic changes added to simplify debugging using the Datascope.  
 5 : Transaction-times are displayed in the Datascope for every request.  
 4 : Maximum packet-size setting was not properly editable from the setup dialog.  
 3 : Scanning of more than one floating-point value updated the 1st tag correctly, but some others with garbage.

2 : Since first release of this driver, rev 2 fixes "corrupted" float data with BC9000 model units.

#### **DT95SEAL Exception-based Protocol Driver**

8 : Data received and persisted from the last time the Agent-Server ran was not properly re-loaded. An option (unused now) to invert certain data patterns on request was added.

7 : Fixed a bug that prevented "graying" from working correctly.

6 : Revision that always marks all tags healthy at start-up regardless of how long ago they sent any data

5 : Stored a timestamp so we could remember the time that we last received data from a unit, and "gray" it if the timestamp was stale

4 : Added a setup option to allow us to mark all tags in the device as healthy at start-up.

3 : Fixed a bug where the timeout/watchdog added in rev2 was not being checked often enough!

2 : Added a watchdog timer and timeout to allow us to time-out and "gray" a device if it failed to send data often enough.

#### **Hitachi Ethernet Protocol Driver**

9 : Some un-initialized data in the setup has been fixed, documentation updated.

8 : Fixed unpack bugs when scanning real slots from PLC floating-point and other 32-bit elements.

7 : Writing to PLC signed integer now correctly sets the sign bit.

6 : Double-word or 32-bit types fixed.

5 : Extra PLC models supported.

4 : Tag Browsing support added.

2 : As commissioned in Australia.

#### **Koyo Ethernet Protocol Driver**

6 : Open device timeout setting added, to allow a longer initial connection timeout setup.

5 : Driver hang or lock-up bug in handling of Boolean reads fixed. Datascope output improved, timestamps added to scope.

4 : Fixed the writing of data to W types scanned with a Real or Analog tag.

3 : Driver no longer connects to the FED upon load-up, as this caused problems if PLC was connected at the time.

1.2b : Fixed bugs when reading Booleans (Digitals), double-word support bugs fixed as well. Support for BCD coded values fixed as well.

1.0 : Initial version released for testing.

#### **Lovato Protocol Driver**

4 : Bug fixed concerning telegram CRC check.

3 : Scanning ER types into INTEGER slots or Marshal tags types in Adroit was giving garbage, this is now fixed.

2 : Support for more than 9 COM ports added

1 : First revision of the driver for monitoring 3-phase GRAM generator sets.

#### **Mitsubishi FX Series Protocol Driver**

6 : Fixed an old bug where M bits (higher addresses) were not unpacked correctly.

5 : A bug in rev 4 which limited the number of "M" bits allowed to 1024 was fixed.

4 : All PLC models in the plc model selection-list are now selectable, a bug which rejected alternate PLC models fixed. "D" Registers limited to 1024 after testing showed up problems accessing more than 1024 registers.

3 : New driver based on the old FX driver, Scan-point addressing now more closely conforms to how the Japanese intended. DWORD support added, and the ability to set your own PDU length so we could cater



for different PLC models.

>>> NOTE : That scan-points must be re-imported to use this new driver.

#### **Omron Ethernet Protocol Driver**

9 : Added 32 Bit BCD Support.

8 : Now items ARE calculated when negative Extending is performed.

7 : Fixed various scanning-related issues, most of which relating the the scanning of Boolean values".

6 : Revision number incremented to reflect testing completion.

5 : Added support for PLC 32-bit and 64-bit IEEE floating point elements.

4 : Network number setting now gets saved/loaded and is used correctly when the driver establishes connections as well.

3 : When adding a digital I/O point, bits within a register are separated in the address by a period ".". A memory leak related to re-connection after an error was fixed.

2 : AS shutdown hangs resolved, option for a secondary port configuration was added.

NEW DRIVER: .doc and .inf added

**PLEASE NOTE:** The previous version of the Omron Ethernet driver (OMR\_ETH.dll Revision: up to 6) has been updated with some very important fixes, which resolves various scanning issues. We therefore STRONGLY RECOMMEND that you use this updated driver.

#### **Omron Sysmac Protocol Modem Driver**

99 : Optional poll on startup.

98 : Long and float I/O point's word ordering can now be manipulated for signed and unsigned PLC 32-bit and float data types. Added AD0 values to allow different kinds of polling when the modem is online.

97 : Admin AD0 item (scannable address) added for a "poll-now" function , and lazy hang-ups implemented.

96 : Modem only version of OMRSYMC! NOW CALLED OMRSYSMM

95 : Added basic modem support.

NEW DRIVER: .doc and .inf added

#### **Siemens Ethernet (INAT) Protocol Driver**

3 : This is an OEM licensed driver [requiring OEM bit 10 (512)], so that ONLY customers who have this OEM license added to their HASPs will be able to use this driver.

**Note:** For further details on how OEM licensing in Adroit works see the next (August) issue of the TA update.1 : Cluster-awareness function added to prevent any polling when in standby.

NEW DRIVER: .doc and .inf added

#### **Vantage Pro Serial Protocol Driver**

1 : Cluster-awareness function added to prevent any polling when in standby.

NEW DRIVER: .doc and .inf added

Existing Driver Enhancements and Bug Fixes:

#### **Adroit 6 ONLY:**

##### **GSM\_SMS Protocol Driver**

7 : Changed the base Adroit 6 driver libraries, in order to add functionality and improve stability.

6 : Fixed detach operations and use with multiple Command agents.

5 : Initialed message time values to current time and added backward compatible code if PDU specifier is contained in the phone number.

4 : Fixed array fetches and device shutdown.

3 : Two options added for bad-marking when in device/classic mode, this requires the Adroit 6.0.1.0 scan-agent to work correctly.

2 : Decrypt SIM PIN before passing it to the modem.

1f : An issue when unloading the driver which did not release all resources fixed.

1e : Unsolicited (reply) SMSs sent to us were not being parsed for an "OK" correctly.

Documentation updated.

### **OPC\_CL Exception-based Protocol Driver**

60 : Fixed a string write exception bug that was introduced by revision 54 which caused an Agent Server failure.

59 : Changed the base Adroit 6 driver libraries, in order to add functionality and improve stability.

58 : Fixed exception caused by variant conversions to signed 2 byte integers.

57 : Mark devices and tags bad on the unexpected loss of the OPC Server connection.

56 : New configuration dialog layout, for improved ease of use.

55-54 : Various enhancements have been made to improve the resetting, switching and shutting down of the current OPC server connection.

53 : The enumeration of servers has been fixed by doing exact name matches now instead of partial name matches.

52 : This adds the OPC Server call trace log, which should only be enabled at the request of the Adroit Support Desk for troubleshooting problematic OPC client/server communications.

51 : The OPC Server status monitor thread is now protected from any possible exceptions.

50 : This adds the 'Override DCOM' advanced dialog setting, a global setting for all OPC client devices, that should be unchecked to allow your DCOM configuration to be in full control. This setting is set to TRUE by default, for backward compatibility.

49 : This adds the 'OPC Server status monitor time' advanced dialog setting that monitors the OPC Server at a specified interval, in seconds. If the OPC server, or connection to the OPC Server, has failed for any reason, scanned tags will be marked as bad and the driver will attempt to reconnect to the OPC Server. This setting is 0 by default, which disables this functionality.

Documentation updated.

### **Non-version specific:**

### **Allen Bradley SLC 500-DF1 Serial Driver**

7 : Fixed a bug that could cause the driver to hang if it re-tried while doing a control-action or write.  
Documentation updated.

### **DNP 3 Protocol Driver**

46 : Problem with dialog-box conflicts, which could cause setup dialog to not open, has been resolved.

45 : Fixed memory creep.

44a : Diagnostic messages on Datascope cleaned up, memory creep problem with APDUs that contained multiple data types fixed, some crash fixes done.

43e : Added floating-point formats to object types 30,31,32,33,40 and 41.

43d : Data reception on Ethernet transport improved. Internal state-engine problems with the sync-byte resolved. More information is shown on the diagnostic Datascope, Datascope losing data problem resolved, Datascope data is also in color (warning to 4.2 and early 5.0 system users).

43 : If OEM# is wrong, the correct decimal value is displayed, not the bit#. Signed/unsigned value issues when on Ethernet media fixed. Added TCP/IP and UDP support

42 : New control schemes added, allowing assignment per tag. Polling time being truncated to 82013ms was fixed. New polling configuration added.

41 : Thread stack size reduced to 500K to save memory. Problems with error messages not being deleted fixed, and new messages added. Unsolicited function corrected to 0x14 from 0x20! Set time to x/x/1970 bug fixed.

40 : Message decoding fixed for to cater for address HI byte, where I/O >256. Messages with more than 2000 items now update correctly. Thread stack-size increased to 2Mb.

39 : Possible un-initialized memory bug in rev 37 when doing controls fixed. An extra byte not in use at the time was incorrectly filled in.

38 : Control actions can now be set up to retry.

37 : Trip-close function added.

36 : Alcom : Moscad verification done - compare problems on controls, and controls with differing (reversed) on and off times resolved. Initial transport sequence number synchronization fixed during start-up. Added modem control signal configuration for CTS and DRS signals.

Documentation updated.

#### **Hitachi H Protocol Driver**

22 : 32-bit unsigned (DWORD) values are now read and written correctly.

#### **IEC 870-5-101 Protocol Driver**

This driver has been REMOVED from the CD and the WEB until further notice.

#### **Intrac Exception-based Protocol Driver**

12 : Rejected some changes in rev 9 through 11 which caused confusion and instability. This rev is now even more stable than 8.

#### **Klockner Moeller Protocol Driver**

15a : Addition of byte-addressing support for the PS4-200/416 models.

#### **LG\_GLOFA Protocol Driver**

1 : Floating-point values now work.

#### **Mitsubishi AJ71E71 TCP (not UDP) Protocol Driver**

102 : The driver now closes the socket on shut down and more importantly fixes a bug introduced in Rev 100 where the maximum number of words per communication was increased to 480 to accommodate Q series PLCs. However, this caused communication to fail on A2A-S1 series PLCs, which have a larger number of registers than other PLCs because the driver tried to communicate too many words per transaction. The maximum number of words per communication has therefore been returned to 256, since Q series support has been transferred to the mitqje71.dll driver.

**Note:** This driver should be deployed by any customer using Rev 100 or 101 of mitaje71.dll

101 : Fixes a serious problem in rev 100 which caused the driver to not communicate at all.

100 : Added support for SB, ST and SW registers to this driver

Documentation updated.

#### **Mitsubishi FX Series Protocol Driver**

4b : Fixed and re-tested a bug with 32-bit longs in the PLC.

4 : Fixed a bug with strings coming up "empty" from rev 3.

3 : Added string support : NOTE strings are read-only, and the feature is not yet included in MITFXS driver.

### **Modbus Ethernet Protocol Driver**

34-35 : Added purge and configurable sequence checking to help the driver better maintain sequence. Also added a registry key "StringOrder", which allows the ordering to be swapped on every word passed in as a string. This must be activated in the advanced configuration dialog.

33 : Driver diagnostic screen shows times to allow time correlations.

32 : When scanning more than a single string, the I/O task length was calculated wrongly; resolves the "PLC did not send enough data!" error message. 31 : Fixed a bug where port switching carries on infinitely if driver connects OK, but fails to get a response from a device on the remote side of an Ethernet->serial gateway. Secondary port configuration now enforces same CPU type as primary!

30 : hardcoded read and write timeouts of 3 sec, previously these timeouts were ignored.

29 : A bug when setting a device up to share a TCP connection when talking to a common gateway/converter that caused a new connection to be made for each device instead, was fixed.

28 : Device removal fixed.

27: Problem when talking to TSX micro if returning too little data resolved.

26 : The Net latency setting was not being saved correctly, resolved.

25 : "Custom" PDU lengths added to allow customization of your own PLC model.

Documentation updated.

### **Modbus I (RTU and ASCII) Protocol Driver**

51a : Added a sweeper thread to assist idle MOXA devices to clear their buffers when the Agent Server is in standby mode to prevent MOXA from crashing.

50 : Dialogs re-organized to make it easier to understand settings.

49 : Port/channel quiet or Purge time added in order to purge any noise on the line.

48 : "Custom" PDU lengths added to allow customization of your own PLC model.

47 : Important control actions now get priority!

Documentation updated.

### **Modbus Plus MBXAPI Driver**

19 : This driver no longer uses the old Cyberlogic NetBIOS interface, but instead uses their newer MBX drivers. This driver incorporates many internal features found in our Modbus Ethernet driver, most importantly support for string data.

18 : This rev of the driver has been re-worked to include features from the Modbus Ethernet driver. The driver now also uses newer API's from Cyberlogic. The driver now relies on fewer external components, and also automatically optimizes the DM (Data Master) pathing, so this option is no longer available. All other functions remain as-is.

Documentation updated.

### **Modbus Radio Protocol Driver**

9 : Support for virtual-serial-ports (MOXA) added to purge echoed characters sent to the standby in a cluster. Device setting load-save cleaned up. The option to close the port on an error has been added as a global option on the dialog.

8b,a : Driver diagnostic display enhancements added to track server-mode switches when on a standby PC.

7,8 : Enabled cluster-aware mode switching to turn off the internal polling when in shadowed mode.

6 : Ability to use Windows performance monitor on more than 20 devices. The limit is now 300.

5 : 2-byte station addressing allows more than 254 devices, this is limited SCADAPAK RTUs.

Documentation updated.

### **OMRON Sysmac Protocol Driver**

97 : Help button now opens the driver Word document instead of looking for a non-existent help file.  
96a : Fixed the corrupt data values that occurred when scanning some 32-bit elements.  
96 : Byte swapping for floats added, 32-bit BCD added.  
95 : Timing information added to the Datascope screen.  
Documentation updated.

#### **OPC\_CL Exception-based Protocol Driver**

48 : The advanced dialog option "use alternate validation", now remembers its setting.  
47 : Addresses or OPC item names may now contain commas.

#### **PolyComp Sign Ethernet Protocol Driver**

7 : Added priority queuing to synchronize writes better, NOTE: if used on a dual-processor computer or when using hyper threading; all text sends must be spaced by about 50ms.  
6i - 6c : Connection now closes after retry/failures; "write failure" errors filling Event Log now resolved. If used in polled mode, the Read function was returning a trashed buffer, now fixed, allowing proper bad/good state for the device agent healthy bit!  
6 : Timeout period calculating fixed, as it was sometimes waiting too long, Datascope improved.  
5 : Long messages no longer crash the driver and the limit has also been raised.  
Documentation updated.

#### **RDC8102 Exception-based Protocol Driver**

5 : Changed Bit 13 which was the Fire Alarm Signal to Self Test Signal instead

#### **Samsung Protocol Driver**

1 : Cleaned up dialog a bit, fixed help button, COM ports >COM9 added.

#### **ScanRs Protocol Driver**

13 : Fixed a bug where if termination was in front, messages were lost. Good Buffer cleaning now done as well. Datascope output also converts non-printable characters.

#### **S7 functions (SAPI) Exception-based Protocol Driver**

30 : Default PDU length is back to 114 words, It can now be set in the new PDU dialog.  
Documentation updated.

#### **SiStar/Braumat API using alarm 8P Protocol Driver**

33 : Re-compiled to use internal direct event-logging for fatal errors, this removes the dependency on Adroit's AFCdll.dll.

32 : Skipped the bad marking of all tags on failed writes when communications were bad, it takes too long to get all scans back otherwise. Done for Jwaneng.

>>> This is an old driver, which is OEM and will only run for 1 hour otherwise.  
Documentation updated.

#### **Spectrum tele-RANGER Protocol Driver**

56 : Infinite loop when receiving garbage fixed.  
55 : Radio system number parameter was not being checked, the driver now checks the system number of responses  
54 : Internal bug with multiple devices on one port fixed.  
53 : Radio system number not used, the driver typically stayed on system 0.

52 : Ignore all delay settings when doing a GL (Get log) and IR (Interrogation).  
Documentation updated.

#### **Strike ENERMAX Protocol Driver**

8 : Added a settable delay after closing the port at then end of a transaction.

7 : Registry key added to allow control of the port restarting that occurs when communications fails, this is to cater for undesirable Ethernet port-extender behavior. Driver Datascope also shows a message for the port open/close action.

6 : The "quiet" time setting that the driver introduces between requests is not global, and does not need to be set separately in each device. Response testing is also stricter in order to catch missing data, corrupted timestamps, and certain message corruptions that are now discarded.

Documentation updated.

#### **Toshiba (RTU and ASCII) Protocol Driver**

12 : Write prioritization fixed, controls now go out before reads.

11 : Message termination character not being handled correctly now fixed.

10 : Internal Bug fix and supported added for use in redundant configurations with a MOXA Ethernet extender.

9 : Support for Ethernet extender devices.

8 : Allow > 9 com ports, handshaking problem fixed, as well as a setting to prevent the driver closing and re-opening the port after errors

Documentation updated.

#### **Toshiba T2 Ethernet Protocol Driver**

29 : Removed all debugging counters, performance counter now work correctly again.

28Debug : Site tests finalised totally stable now.

24debug : Revision for some on-site tests!

>>>Any prior revisions of this driver may exhibit instability and devices stopping randomly.

#### **VAMS Protocol Driver**

19a : Minor changes while testing the CSV logfile feature

19 Background polling for CSV logfiles added, this feature allows the driver to "catch-up" data through a CSV file which it deletes afterwards. Event-logging is ON by default in this rev as well.

18 CRC checks are now optional, dialog re-organised.

>>> This is an old driver, which is OEM and will only run for 1 hour otherwise.

Documentation Updated ONLY:

DPM Products Protocol Driver

Mitsubishi A71UC24 Protocol Driver

OMRON Sysmac Protocol Driver

TDC0550 Protocol Driver

UserDrv Exception-based Protocol Driver